

Establishing a Marine Mammal Stranding Network in the Bahamas

Diane Elaine Claridge
Bahamas Marine Mammal Research Organisation
P.O. Box AB-20714, Marsh Harbour
Abaco, Bahamas
phone: (242) 366-4155 fax: (242) 366-4155 email: Diane.Claridge@bahamaswhales.org

Charlotte Ann Dunn
Bahamas Marine Mammal Research Organisation
P.O. Box AB-20714, Marsh Harbour
Abaco, Bahamas
phone: (242) 366-4155 fax: (242) 366-4155 email: info@bahamaswhales.org

Grant Number: N000140810017
<http://www.bahamaswhales.org>

LONG-TERM GOALS

The long-term goals of this project are to establish a marine mammal stranding network in the Bahamas to better understand the conservation needs of marine mammals in the Bahamas, with particular focus on the Tongue of the Ocean and the US Navy's AUTEK range. Through training workshops, we will build the capacity within the Bahamas to improve our ability to respond more quickly and more effectively to stranding events and increase our understanding of the cause of strandings as well as the biology of marine mammals. The stranding network will be structured so that it will become self-sufficient and able to continue into the future with local funding.

OBJECTIVES

The specific objectives are the following:

- 1) To identify and liaise with potential stranding network participants.
- 2) To develop the structure of the stranding network.
- 3) To organize a workshop to train Bahamians to effectively respond to stranding events.
- 4) To distribute stranding kits throughout the island chain.
- 5) To establish a link with stranding networks in the US and wider Caribbean region.

APPROACH

The establishment of the Bahamas Marine Mammal Stranding Network began by creating a core team made up of individuals and organizations that had shown an interest in forming a stranding network in the past. These included personnel from the Bahamas Department of Marine Resources, Bahamas National Trust, and from captive facilities in the Bahamas (Dolphin Encounters and Atlantis Resort in Nassau and Dolphin Experience in Freeport), as well as using the expertise from the SE Stranding Coordinator in Miami, Florida at NOAA Fisheries. A meeting of this core group was held in Nassau on November 8th, 2007 with the primary goal of formulating the basic organizational structure of the

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 2008		2. REPORT TYPE		3. DATES COVERED 00-00-2008 to 00-00-2008	
4. TITLE AND SUBTITLE Establishing a Marine Mammal Stranding Network in the Bahamas				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Bahamas Marine Mammal Research Organisation,P.O. Box AB-20714, Marsh Harbour,Abaco, Bahamas,				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 4	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

stranding network, and detailing plans for the first workshop to be held in the spring 2008, i.e. choose a venue, a list of participants, invited speakers, and activities. During the next 6 months, supplies were purchased for stranding kits to be distributed at the workshop, and the workshop plans were finalized.

WORK COMPLETED

A 2-day marine mammal stranding workshop was held in Nassau on May 3rd – 4th, 2008 with over 60 participants representing eight of the Bahamian islands (Figure 1).

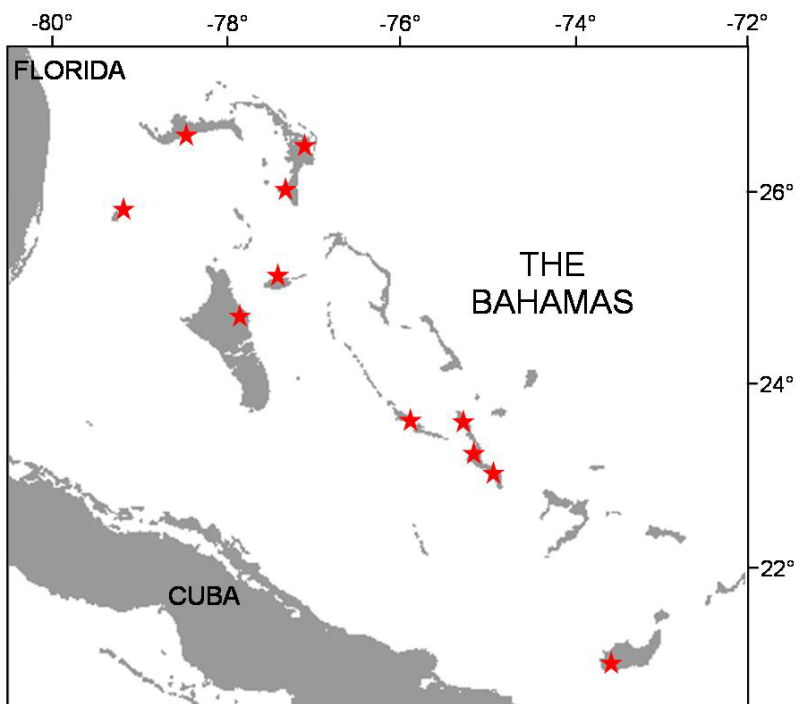


Figure 1. Map of the Bahamas showing each island that was represented at the Stranding Workshop by local participants. Each of these islands now has a large stranding kit and at least one small kit (depending on the size of the island). The map shows how the project has successfully trained individuals and distributed stranding kits throughout the island archipelago.

The workshop was officially opened by the Honorable Lawrence S. Cartwright, Minister of Agriculture & Marine Resources for the Bahamas who noted in his keynote address: "I believe the establishment of a Marine Mammal Stranding Network in The Bahamas will serve to promote the conservation of marine mammal species and their habitat by improving the rescue and humane care of stranded marine mammals, advancing stranding science, and increasing public awareness through education."

The speakers included the two project investigators for this award, as well as the following:

The Honourable Lawrence S. Cartwright, Minister of Agriculture & Marine Resources, Bahamas
Lester Gittens, Department of Marine Resources, Bahamas
Dr. Janet Whaley, National Marine Mammal Stranding Coordinator, NOAA Fisheries, USA
Andrea Bogomolni, Assistant Director, The Eastern Caribbean Cetacean Network

Blair Mase-Guthrie, Southeast Regional Stranding Coordinator, NOAA Fisheries, USA
Dr. Darlene Ketten, Senior Scientist, Woods Hole Oceanographic Institute, USA
Dr. Ruth Ewing, Veterinary Medical Officer, NOAA Fisheries, USA
Dr. Bethany Doescher, Senior Veterinarian, Atlantis Resort, Bahamas
Dr. Julia Zaias, Veterinary Director and Pathologist, Marine Animal Rescue Society, USA
Pedro S. Baranda, Head Trainer, Dolphin Experience, Unexso, Bahamas

Amongst the attendees of the workshop were the Director of Marine Resources along with nine Fisheries Officers, five veterinarians from the Bahamas Department of Agriculture, two private veterinarians, eight Bahamas National Trust park wardens, representatives from the Bahamas Humane Society, a representative from AUTEK and numerous individuals from conservation organizations throughout the Bahamas. All participants were trained as First Responders through oral presentations made by the listed speakers, and hands-on training during the necropsy of three Atlantic bottlenose dolphins performed by Drs. Ewing, Ketten and Zaias.

RESULTS

The Bahamas Marine Mammal Stranding Network has been created. The training workshop was a huge success with over 60 participants trained as First Responders, and six large stranding kits have been distributed to six of the Bahamian islands that do not have captive facilities, and 14 small stranding kits spread throughout the island chain. Media coverage of the workshop included television reporting (“Kerzner Today Show” on the local Bahamas channel ZNS, on the 27th May 2008 at 8pm) and in the local press (The Nassau Tribune, p.8, 24th May, 2008). For more information on the stranding workshop please see: <http://www.bahamaswhales.org/resources/workshop.html>

The Bahamas Department of Marine Resources now has a 24/7 stranding hotline number that can be used for reporting injured or stranded marine animals. An online discussion group has been established for quick and easy information sharing. The online Google group allows documents to be stored and shared, and one of these documents is an up to date contact tree spreadsheet that network members can edit and keep up to date. The contact trees allow the hotline representative to reach individuals on each island, in an area with the closest proximity to the stranding. There are currently 67 registered stranding network members.

IMPACT/APPLICATIONS

Mass strandings of beaked whales have been correlated with international naval operations (Simmonds and Lopez-Juraco 1991, Frantzis 1998, Jepson *et al.* 2003), raising concern that beaked whales are particularly vulnerable to naval sonar. One of these events occurred on March 15th, 2000 in the northern Bahamas during which 14 beaked whales stranded (Balcomb and Claridge 2001, Evans and England 2001). The US Navy has two operating ranges in Bahamian waters, and following additional strandings during 2005 and 2006 near the Atlantic Undersea Testing and Evaluation Center (AUTEK), public concern has increased within the Bahamas about the impacts these operations may be having on beaked whales and other cetacean species. AUTEK is often blamed for strandings without a thorough examination of stranded animals undertaken. In light of these developments, there has been a growing need for to train Bahamians to become First Responders to quickly response to each stranding and conduct an initial examination, assist live strandings, and facilitate a more thorough investigation to determine the cause of death. The establishment of the Bahamas Marine Mammal Stranding Network has begun this process of training and capacity building amongst Bahamians.

RELATED PROJECTS

Behavior Response Study (BRS)

The goal of this project is to understand how cetaceans respond to underwater sound. This international study is led by Dr. Ian Boyd (SMRU) as the Chief Scientist and holder of Bahamian research permit, and the Principal Investigator and holder of US permit was Dr. Brandon Southall (National Oceanographic and Atmospheric Administration (NOAA)). The project is supported by the Office of Naval Research (ONR) and US Department of Defense (NAVSEA PEO IWS Mr. Joseph Johnson and OPNAV N45 Dr. Frank Stone).

Distribution, abundance and population structuring of beaked whales in the Great Bahama Canyon, northern Bahamas

The goals of this project are to determine beaked whale distribution and abundance in the Great Bahama Canyon (Northeast and Northwest Providence Channels and Tongue of the Ocean) from visual and acoustic surveys. The study is also examining population structure of beaked whales in the Great Bahama Canyon through the analysis of photo-identification data and genetic samples currently archived by BMMRO and from photographs and biopsy samples obtained during the surveys. The project is funded by an ONR grant (FY07 – FY10) and Diane Claridge (BMMRO) is the Principal Investigator and Dr. John Durban (NOAA) is the co-Principal Investigator. Dr. Jonathan Gordon (SMRU) is running the acoustic surveys with funding from the UK's Defense Science and Technology Laboratory.

REFERENCES

Balcomb, K.C and D.E. Claridge. (2001). A mass stranding of cetaceans caused by naval sonar in the Bahamas. *Bahamas Journal of Science* 5:2-12.

Evans, D.I. and G.R. England. (2001) Joint interim report Bahamas marine mammal stranding event of 15 – 16 March 2000. National Oceanographic and Atmospheric Administration. 59 pp. Available from: http://www.nmfs.noaa.gov/prot_res/PR2/Health_and_Stranding_Response_Program/Interim_Bahamas_Report.pdf

Frantzis, A. 1998. Does acoustic testing strand whales? *Nature* 392:29.

Jepson, P.D., M. Arbelo, R. Deaville, I.A.P. Patterson, P. Castro, J.R. Baker, E. Degollada, H.M. Ross, P. Herraiez, A.M. Pocknell, F. Rodriguez, F.E. Howie, A. Espinosa, R.J. Reid, J.R. Jaber, V. Martin, A.A. Cunningham and A. Fernandez. 2003. Gas-bubble lesions in stranded cetaceans. *Nature* 425:575-576.

Simmonds, M. P. and L. F. Lopez-Juraco. 1991. Whales and the military. *Nature* 351:448.